

GUIDELINES FOR ADAPTATION OF LTSM AND ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENT

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Introduction

- Normal vision – incidental learning, exposed to a wide variety of experiences – 80% of information taken in through vision
- Visually impaired – also to be exposed to wide variety of experiences – in ways that will enable learning through senses other than vision
- Cannot take in information at a glance – touching essential
- Explore tactile text, graphics, objects, shapes
- Additional time
- Not slower learner – uses different, non-visual method, deserves less visual, suitably adapted approach and methodology

Introduction (continued)

- Workbooks

2 books/child: numeracy, literacy (mother tongue)

128 worksheets – one a day for four days of week

2 more books to come for 3rd and 4th terms

assist teachers who lack access to stimulating material and printing equipment

assist with multilingual classes

assist with more than one grade in same class

assist with time management

start with revision of previous grade – identify needs for extra support

Blind learners – no writing in books

Partially sighted – books enlarged to A3 – different font sizes not possible with current format

Reasons for adaptation

- To make knowledge, skills, understanding and tasks accessible
- To make tasks meaningful
- To give the visually impaired learner an equal opportunity

General principles underlying adaptation

1. Only adapt if it is necessary to provide access
2. Assess the same skills, knowledge and concepts
3. Keep the same level of difficulty as original
4. Keep balance in term of weighting and content
5. Avoid requiring a disproportionately large amount of time
6. Replace material only when essential to provide access
7. Guard against complete removal of visual material

Approaches to adaptation

1. Picture or diagram simplified or shown differently
2. Picture/diagram replaced with written description
3. Picture/diagram supplemented with written description
4. Picture/diagram replaced with real item or model
5. Unnecessary picture/diagram removed
6. Amount of information reduced
7. Measurements altered
8. Inherently visual material replaced with equivalent non-visual material
9. Question/task that requires learner to draw, replaced/reversed or written explanation accepted as response

1 Picture or diagram simplified or shown differently

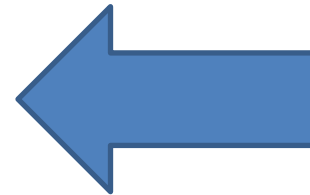
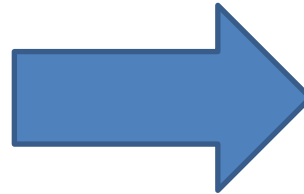
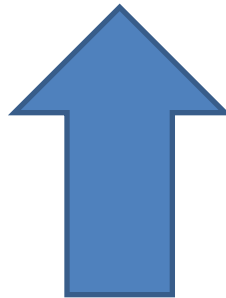
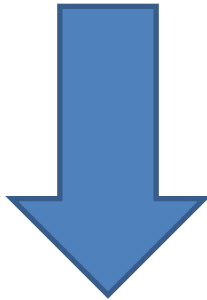
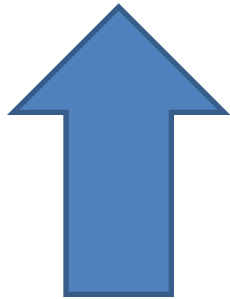
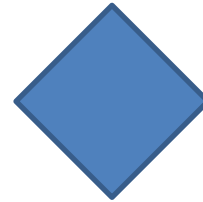
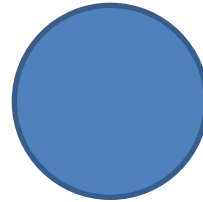
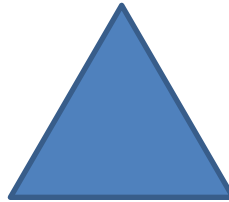
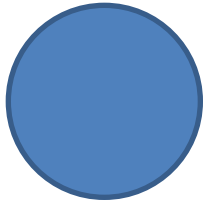
Matching

Find the picture that is the same as the one in the first box.



Adaptation – Grade 1 Numeracy

- Find the shape that is the same as the first one

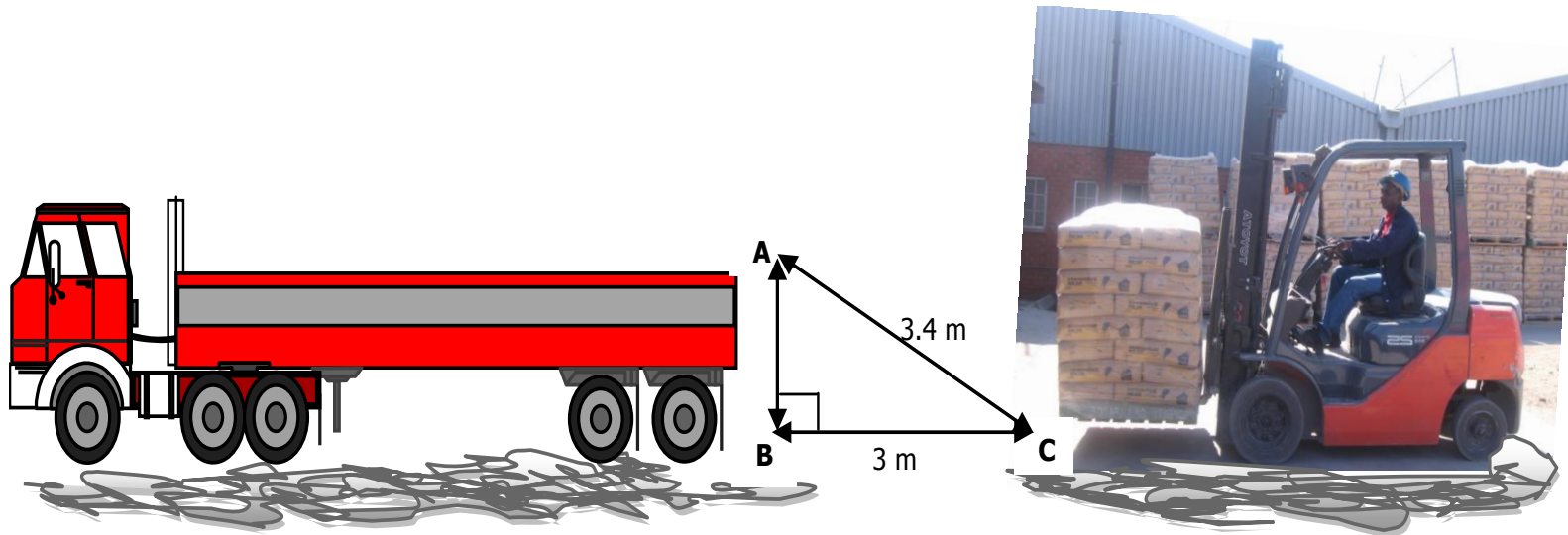


1 Picture or diagram simplified or shown differently

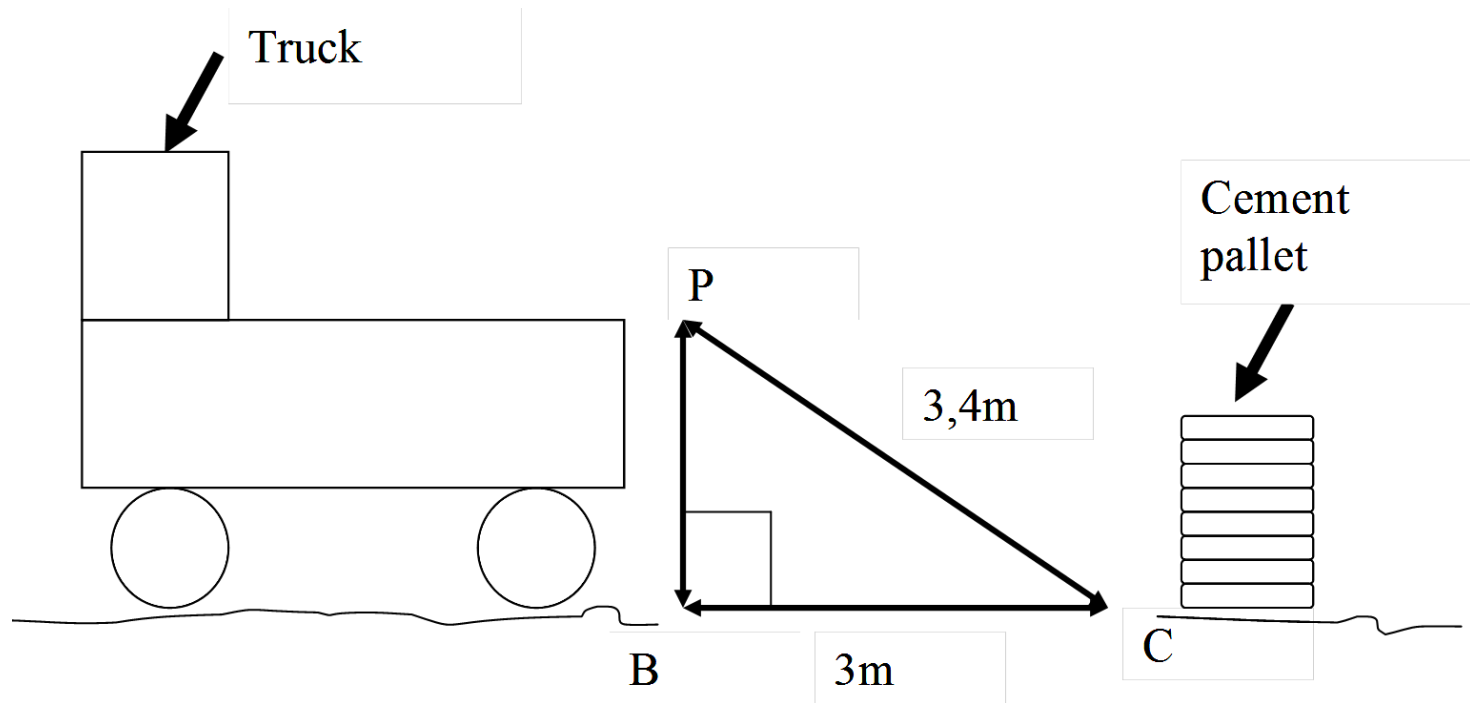
Grade 9 Maths

Access to adequate housing

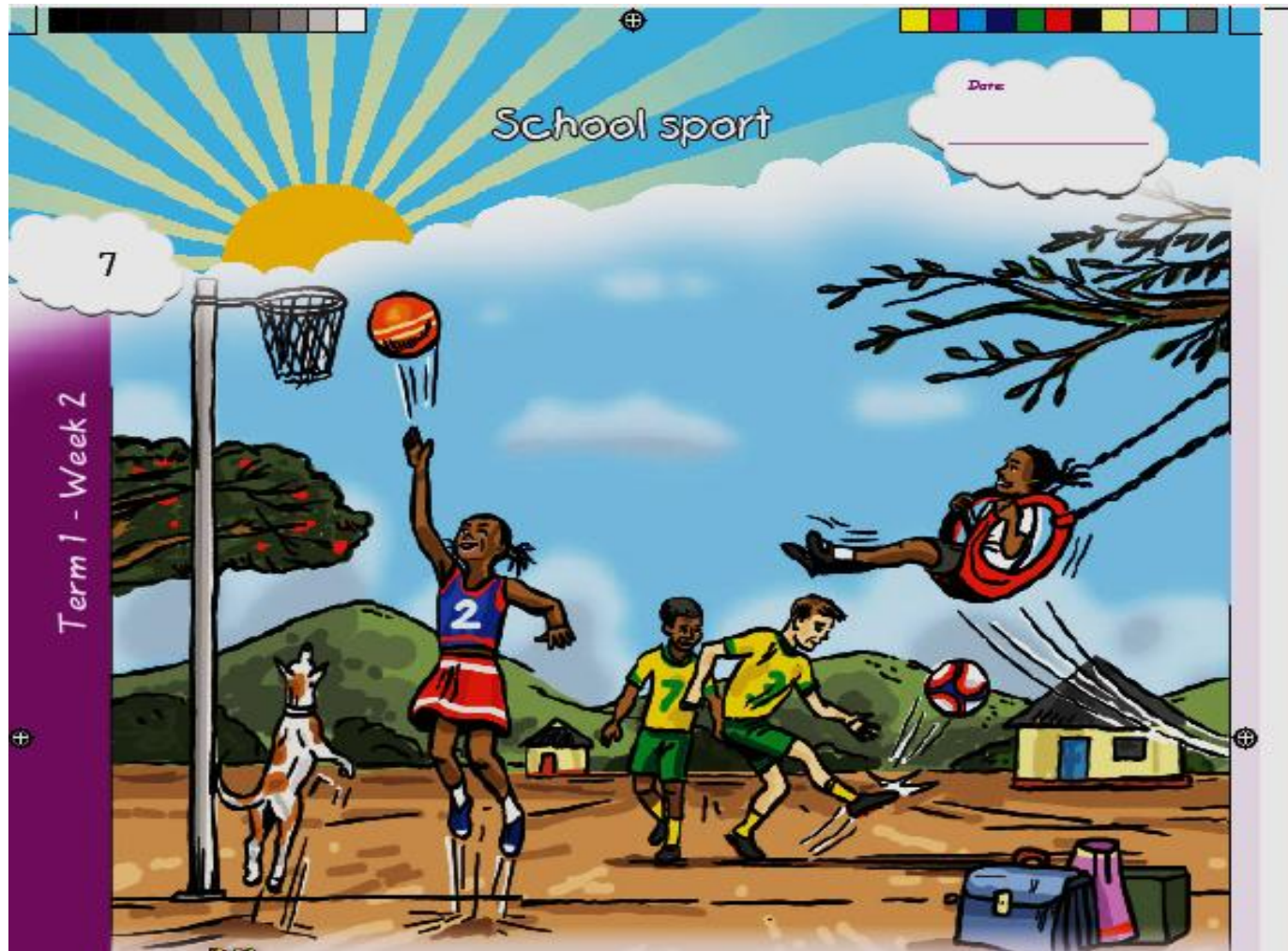
Eight pallets of cement are transported in a truck-trailer to the RDP construction site for building the houses. The mass of one bag of cement is 50kg and one pallet contains 40 bags.



Adaptation



2 Picture or diagram replaced with written description



Adaptation Grade 2 Literacy

1.7 School sport

Date: _____

1 Let's speak

Listen to your teacher read the story and then answer the questions

Mom, please would you help me. The school has given me a sheet of paper telling me all the different things I can do after school. I can only choose two things and I want to do all of them. On Monday I can play soccer. The school has bought a special ball that has a bell in it so that we can hear where the ball is. On Tuesday I can play chess – and you know how much I love playing chess. On Wednesday there are singing classes and I love to sing. On Thursday there are debating classes and on Friday the school offers drama classes. What should I do?

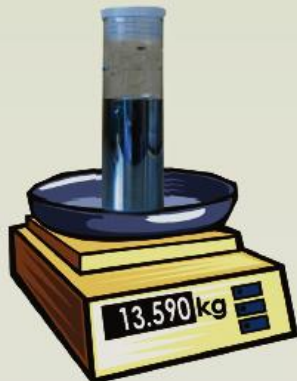
What games do you like playing?

Why are activities important for us?

What is your favourite after school activity? Tell the class why you love it.

2 Picture or diagram replaced with written description

3. Complete the table below.



Capacity	Weight	
1 litre liquid	Kg	g
Water		
Sea water		
Milk		
Paraffin		
Petrol		
Cooking oil		
Mercury		



Adaptation Grade 6 Mathematics

- Mr Nelson weighs 1 litre of different liquids on a digital scale. He finds that:
 - 1 l full cream milk weighs 1.027kg
 - 1 l water weighs 1.000kg
 - 1 l sea water weighs 1.025kg
 - 1 l cooking oil weighs 0.920kg
 - 1 l paraffin weighs 0.800kg
 - 1 l petrol weighs 0.737kg
 - 1 l mercury weighs 13.590kg
- Complete the table below

Capacity	Weight	
1 litre liquid	Kg	g

2 Picture or diagram replaced with written description



Adaptation English

- Source 3 is a cartoon depicting a young school boy bending over a small bench, pants down to his knees. He has a tattoo on his body saying “THE CONSTITUTION OUTLAWING CORPORAL PUNISHMENT”.
- Gauteng Judge-President, Bernard Ngoepe, is standing behind him and caning him with a stick over his naked but. The boy is screaming with pain and Judge-President Ngoepe is saying “ It’s fine if it’s done with love!”
- On the right hand side in the picture a lady is staring in astonishment at the judge beating the boy. She is carrying a scale in her left hand.
- Underneath the cartoon it says: “Gauteng Judge-President Bernard Ngoepe says pupils should be beaten with love – Report.

The Soweton, Soweto, 18 April 2000

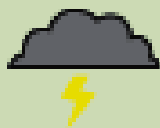
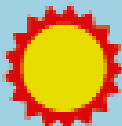
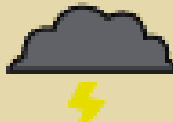
- 3.1 What do you understand by 'corporal punishment'? (1)
- 3.2 To which issue does this cartoon speak? (1)
- 3.3 Which image is used to represent our democratic legal system and why is it used here? (2)
- 3.4 In a paragraph of about 250 words, discuss whether you are in favour of or against corporal punishment in schools. (7)

3 Picture or diagram supplemented by a written explanation



Weather Chart February

Read this weather chart and say what the weather will be each day.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						
						
						
						

Adaptation Grade 2 Literacy

4.9 Will it rain today?

Date:

1 Let's talk

Listen to your teacher read about the weather and then answer the questions.

Good morning, good morning everybody. This is Jason van Graan and here is the weather. This morning will be hot and sunny with blue skies and no chance of rain. This afternoon there is a possibility that it will be partly cloudy to cloudy and there will be a south easter along the coast.

Early this evening there is the possibility of thunderstorms and rain.

Until tomorrow, Have a very good day.

What kind of weather are we going to have today? Tell your friend.

Where do we find out about the weather?

Why is it important for you to know what the weather will be?

Adaptation continued

Read the weather chart for two weeks in February, and say what the weather will be each day.

Weather symbols.

- Sunny  sun symbol
- Partly cloudy  sun in one texture and cloud covering over half the sun
- Rainy  cloud symbol whole cloud textured and rain drops coming down from cloud
- Thunder storm  heavily textured cloud with zig-zag lightning coming from the cloud.

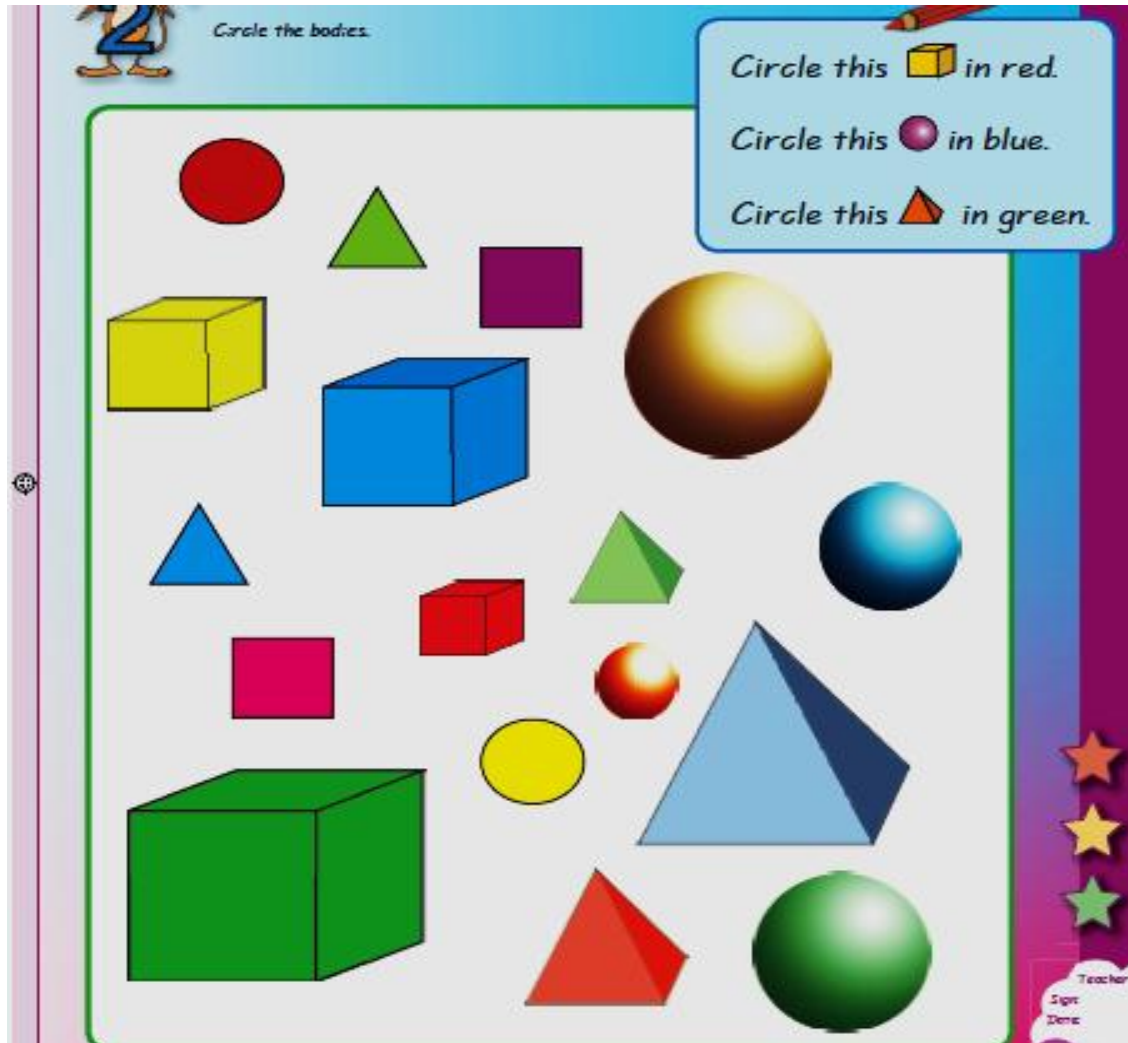
Adaptation continued

Weather

Day	Week 1	Week 2
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		

4 Picture or diagram replaced with real item or model

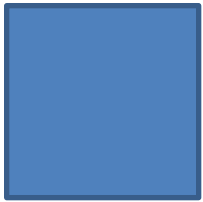
- Shapes and bodies



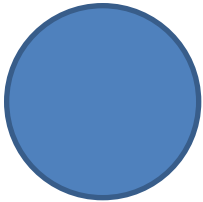
Adaptation Grade 1 Numeracy

- Shapes

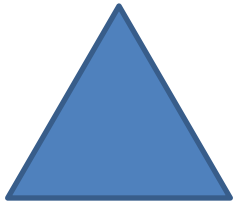
Let us learn shapes again



Square



Circle



Triangle

Adaptation continued

- **Shapes and bodies**

Let us learn about bodies. Use your 3D bodies to learn about a cube, a sphere and a prism.

Cube

- Take a cube in your hand.
- How many sides does a cube have?
- What is the shape of the sides of a cube?
- Do you know anything that is the shape of a cube?

Prism

- Take a prism in your hand.
- How many sides does a prism have?
- What is the shape of the sides of a prism?
- Do you know anything that is the shape of a prism?

Adaptation continued

Sphere

- Take a sphere in your hand.
- How many sides does a sphere have?
- What is the shape of the sides of a sphere?
- Which of your favourite things does a sphere remind you of?

4 Picture or diagram replaced with real item or model

What is a scale? Circle all the measuring instruments used to weigh objects.

What would you weight with each of those measuring instrument?



1. What do we weigh with measuring instruments?

Measuring instrument	Give an example what you can weigh with it
Spring scale	Meat

Adaptation Grade 6 Mathematics

- Bring a variety of measuring instruments, including the ones in the picture, to class.
- Continue with the question.



Find

Where are they?

Say where these children are.



5 Unnecessary picture or diagram removed

17

Term 1 - Week 5



Let's speak

- Do you think animals help each other? How?
- Can a small animal help a big animal? How?
- Can a small person help a big person? How?
- Do you think animals talk to each other? Give reasons for your answer.

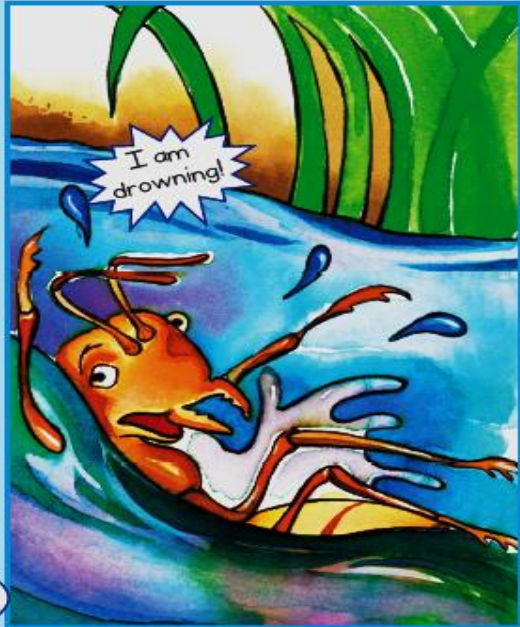


Let's read

The ant and the dove

One hot day, an ant was sitting next to a river. "How lovely it will be to swim," she thought. She put one leg into the river, then another and another. Suddenly, she fell in. The water was flowing so strongly she could not get out.

"Help!" she shouted. "I am drowning!" But no one heard her shout. When the ant felt sure she would **drown**, a dove flew past. She saw the ant was in **danger** and **dropped** a leaf into the water. It was like a little boat and the ant climbed on.



Thank you!



"Thank you **dove**. One **day** I will help you."

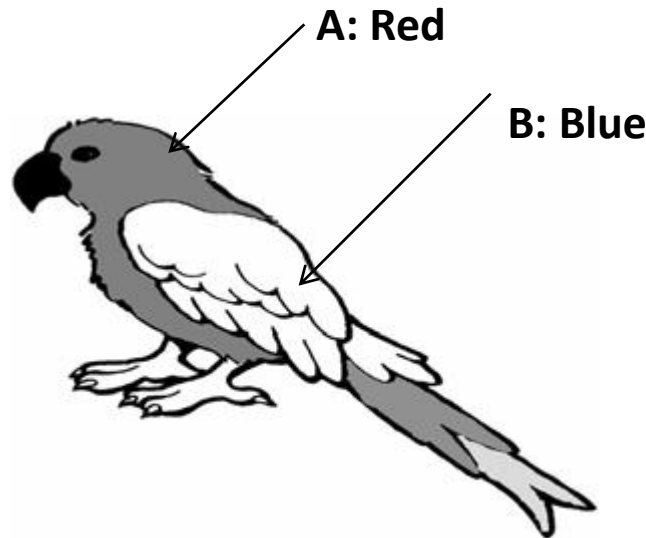
The dove laughed. "You are too small to help me, little ant." And she flew away.

Adaptation Grade 6 Language

- The pictures are not necessary, because the words the ant is speaking are already in the text. Simply remove the pictures.

5 Unnecessary picture or diagram removed

- An artist has only the three following colours of paint: magenta, yellow, cyan. A picture of a parrot has to be painted in the colours shown:



- Suggest how the artist can mix the above THREE colours to paint the various parts of the parrot. Only write down the letters (A and B) and next to each the colour(s) that she must mix.

Adaptation Grade 12 Physical Science

- **An artist has only the three following colours of paint: magenta, yellow, cyan. A picture of a parrot has to be painted in these colours:**
 - Body (A) – Red**
 - Wings (B) – Blue**
- **Suggest how the artist can mix the above THREE colours to paint the various parts of the parrot. Only write down the letters (A and B) and next to each the colour(s) that she must mix.**

6 Amount of information reduced

6. Look at the table below and answer the questions:

Beaufort West																		
535	Bloemfontein																	
463	998	Cape Town																
316	219	779	Colesburg															
1225	667	1660	881	Durban														
597	575	1042	518	667	East London													
237	764	436	545	1240	630	George - Garden Route												
951	417	1405	623	598	992	1168	Johannesburg											
497	175	960	284	842	750	734	467	Kimberley										
1386	854	1886	1058	774	1308	1603	465	939	Komatipoort									
273	808	392	608	1306	696	66	1234	770	1669	Mossel Bay								
1293	771	1770	964	689	1214	1509	358	832	87	1575	Nelspruit - Southern Kruger gate							
179	714	422	495	1244	689	63	1130	676	1565	94	1472	Oudshoorn						
1486	952	1940	1158	910	1391	1686	535	1009	308	1726	221	1391	Phalaborwa - Northern Kruger Gate					
405	635	756	454	927	300	330	1062	752	1484	396	1373	358	1524	Port Elizabeth				
1009	475	1463	681	656	1050	1226	58	532	429	1292	342	1188	477	1120	Pretoria			
1402	880	1888	1073	809	1334	1616	478	952	105	1695	120	1561	222	1480	462	Skukuza - Kruger Park		
440	975	49	756	1594	1070	392	1391	937	1826	363	1733	399	1866	739	1449	1842	Stellenbosch	
1656	1890	1469	1772	2557	2280	1761	2189	1715	2545	1797	2458	1703	2617	2077	2116	2578	1462	Windhoek

	km	m
a. If Beaufort West is 961 km from Johannesburg, how far is:	981 km	
b. Durban from Johannesburg?		
c. Kimberley from Cape Town?		
d. Mossel Bay from Pretoria?		
e. East London from Cape Town?		
f. Komatipoort from Oudtshoorn?		
g. Phalaborwa from Johannesburg?		
h. Stellenbosch from Pretoria?		
i. Stellenbosch from Cape Town?		
j. Nelspruit from Pretoria?		
k. Windhoek from Johannesburg?		

Adaptation Grade 6 Mathematics

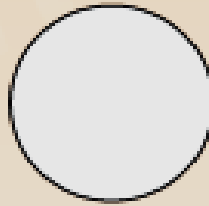
- Too much information
- Do only the columns and distances for Bloemfontein, Cape Town, Durban, Johannesburg, Pretoria
- Change questions to include only these cities
- Make sure you have 11 questions again

7 Measurements altered

Term 2 - Week 7

2. Draw a radius for each of the following circles. Measure the radius and give your answer in mm and cm.

a.

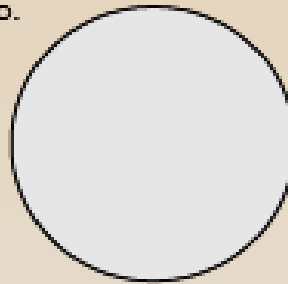


Radius

mm

cm

b.

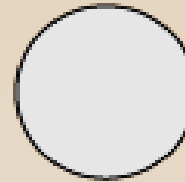


Radius

mm

cm

c.



Radius

mm

cm

- d. Draw a diameter for each of the circles above. Measure the diameter and give your answer in mm and cm.

Diameter

mm

cm

Diameter

mm

cm

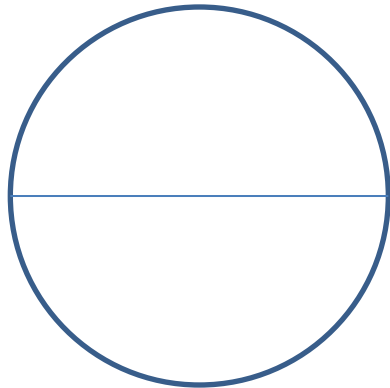
Diameter

mm

cm

Adaptation Grade 6 Mathematics

- Draw a 3cm diameter or 5 cm diameter that is easy to measure. The visually impaired learner cannot be expected to measure very accurately.
- Let them calculate the radius.
- Leave the questions as they are.



8 Inherently visual material replaced with non-visual material

Quote:

When she thought about it afterwards, it seemed to Clara that the time she and Maxi spent on the train was like a dream, or an old-fashioned flickering film at the cinema where images followed one after another before you had time to make sense of them.

12. The author describes Clara's time on the train as *like an old-fashioned flickering flame*.

- 12.1 Explain as fully as you can why you think the author uses this image. (2 marks)
- 12.2 Write a short paragraph to explain what it tells you about Clara's feelings. (3 marks)

Adaptation Grade 12 Literature

Quote:

- *Clara thinks, “If I open my mouth, all the tears that are squashed together in the back of my throat will spill out like a waterfall and drown my mother.*

12.1 Explain as fully as you can why the author uses the image of a waterfall. (2 marks)

- **12.2 What does this sentence tell you about Clara’s feelings? (3 marks)**

9 Question that requires learner to draw, replaced, changed or reversed

Shapes

Complete these drawings.

27

Term 1 - Week 7

Square

Diamond

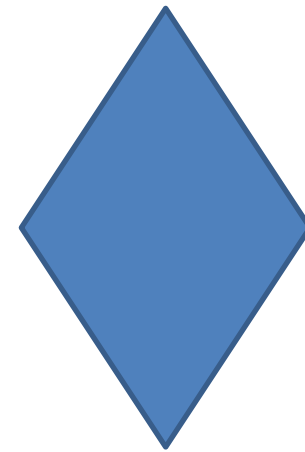
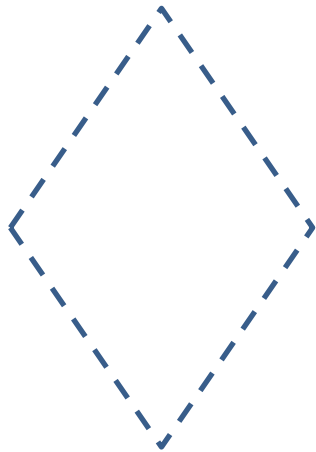
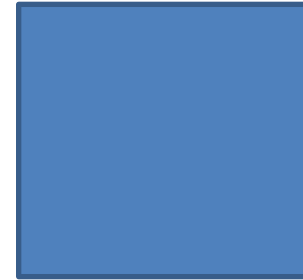
English

GUIDELINES FOR AD...

English NUMERACY...

Adaptation Grade 1 Numeracy

- Complete these drawings with play dough.



Let's find

Complete the pattern to the end.
Then create a few patterns of your own.

9

♥ ♦ ♥ ♦ ♥ ♦ ♥ ♦ ♥ ♦

★ ■ ● ★ ■ ● ★ ■ ● ★

▲ ● ▱ ▲ ● ▱ ▲ ● ▱

● ● ● ● ● ● ● ● ● ●

🌸 🌸 🌸 🌸 🌸 🌸 🌸

b p q d b p q d

♥ + ♥ + ♥ + ♥

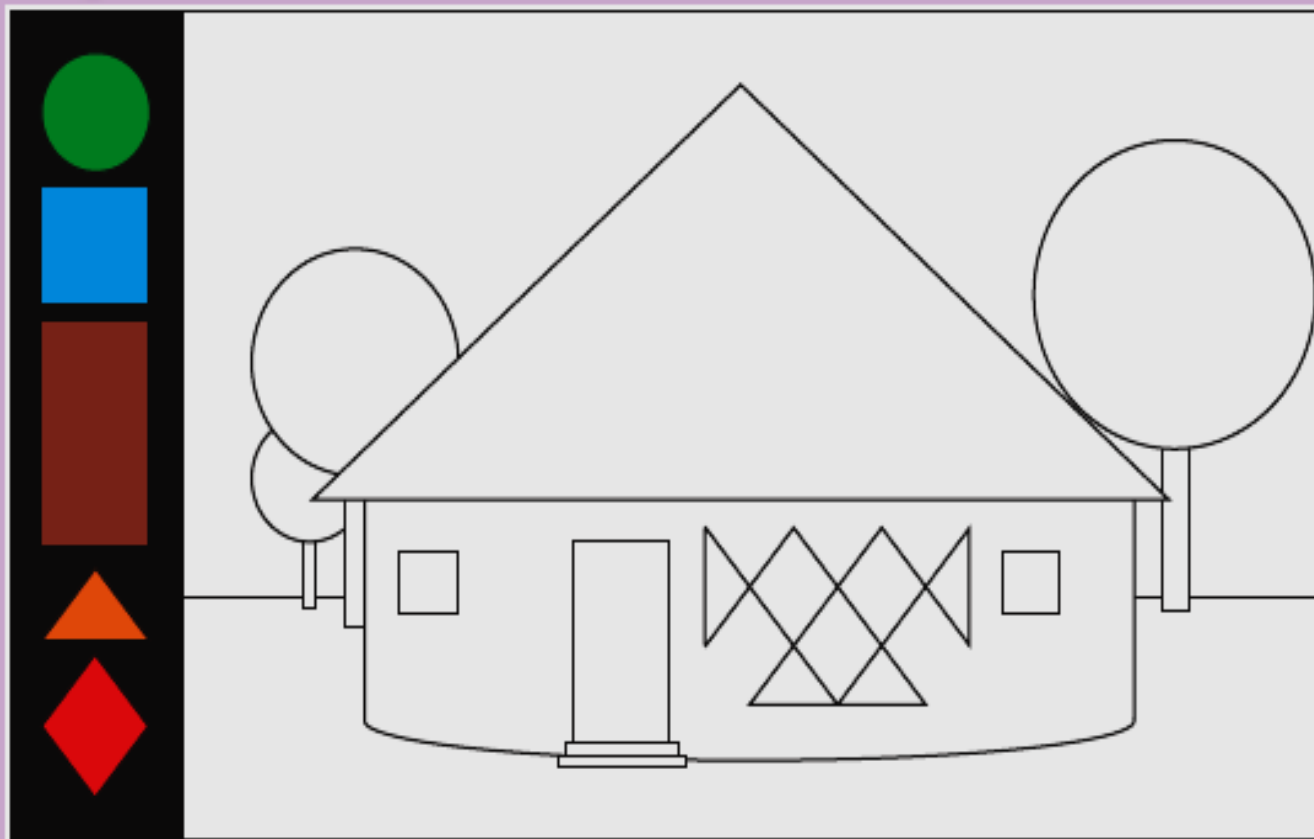
□ △ ◇ □ △ ◇ □ △ ◇

● ● ● ● ● ●



Let's draw

Colour the picture according to the colours of the shapes.

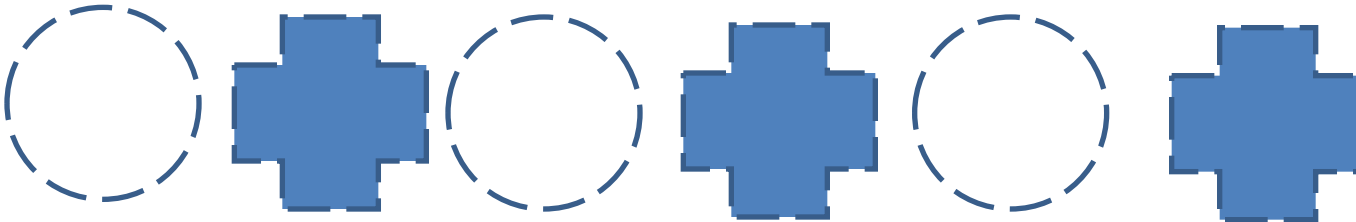
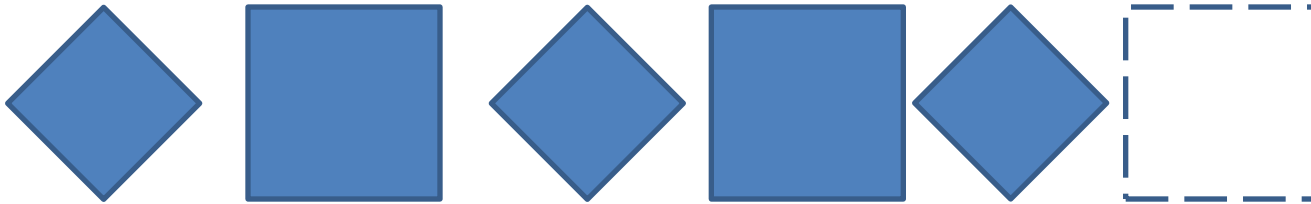


Adaptation Grade 1 Literacy

Shape

Let's find

Use your brainy blocks to complete the pattern to the end.

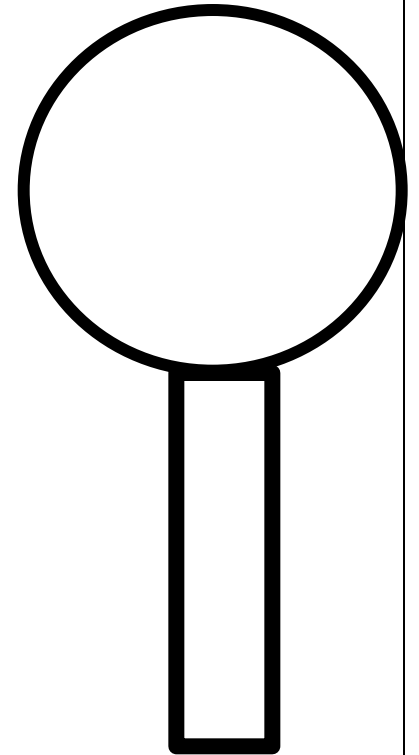
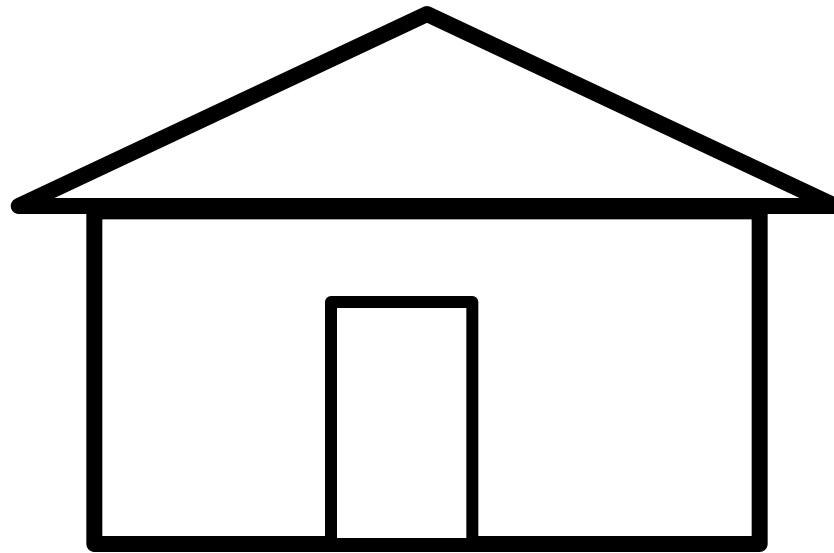


Now make your own pattern

Adaptation Grade 1 Literacy

Let us build

Use your brainy blocks to build the picture.



Use your brainy blocks to add other things to your picture.

10 Question that requires learner to draw – allow an explanation or description



Adaptation Grade 2 Literacy

Fun

Build a bus with your brainy blocks or play dough. Imagine you are going on a journey in your bus. Tell the class where you are going.



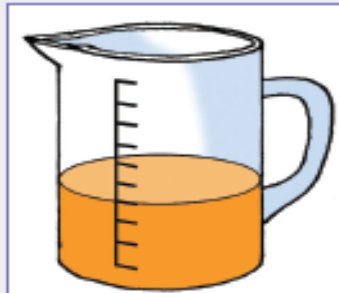
**FANTASTIC
FUN**
Mind-Hand-Eye
co-ordination
activity for mental,
manual and visual
development

Challenges



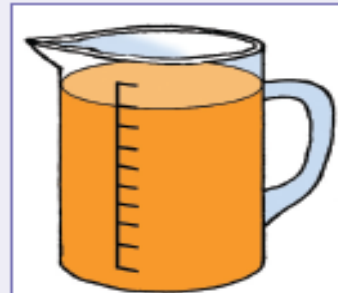
The jug on the left holds 1 litre of juice.

Which jug has the same and which jug has less juice in?



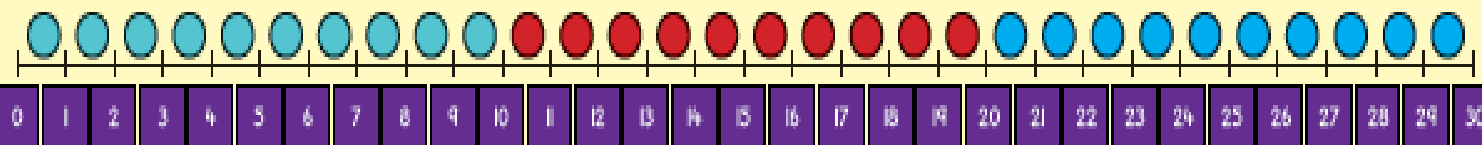
same

less



same

less



$$19 + 11 = \square + \square + \square + \square = \square$$